



Montana Office of Public Instruction  
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# ***iAnalyze & CRT Released Items Training***

***Montana Assessment Conference***  
*Sponsored by the Office of Public Instruction*

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## ***Purpose Of This Session***

- ***Brief Overview of the CRT***
- ***Analysis Procedures***
- ***Released items & Materials***
- ***Introduction to iAnalyze***
- ***Applications of CRT Data***

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## ***Criterion Referenced Test (CRT)***

- ***All schools in Montana should have three years of CRT data.***
- ***Currently given to grades 3-8, & 10***  
***–Spring 2008 – Science grades 4, 8, & 10***
- ***Subjects: reading and math***
- ***Multiple choice and constructed response***

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### ***CRT - Continued***

*The CRT measures an individual's performance against a specific set of criteria (Montana standards & benchmarks) for the purpose of improvement in curriculum, instruction, and student achievement.*

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### ***Brief Overview Of The CRT***

- *The test consists of common (scored) and embedded field test items.*
  - *Sixteen forms per grade provides a large pool of field test items*
  - *Field test items become common items in future tests*
- *Only common items are used for scoring.*

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### ***Types Of Items On The CRT***

- *Multiple Choice—Reading and Mathematics*
- *Short answer—Only Mathematics*
- *Constructed Response (called open response in iAnalyze)—Reading and Mathematics*

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### ***The CRT Gives You Data For:***

- *Individual Students*
- *Class or Grade Level*
- *Subgroups*
- *District*
- *State*

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### ***Assessment Techniques & Tools***

- *Look for trends, patterns, or clusters in the data*
- *Analyze data from multiple choice & constructed response separately*
- *Base decisions on more than one data point*

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### ***Assessment Techniques & Tools (Cont.)***

- *Look at data for insight into:*
  - *Curriculum*
  - *Instruction*
  - *Student Achievement*
- *Share the data appropriately*
  - *Teachers*
  - *Parents*
  - *Students*

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## CRT Data Analysis

- **Analyze:**
  - Test questions
  - Questions & answers related to each Montana standard
  - Correct answers vs. incorrect answers
  - Percentage of correct responses for each standard for multiple choice and constructed response

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## Percentage of Correct Responses on each Standard in Reading for Multiple Choice

Grade 4	Standard Content	Percent of Correct Responses by All Students		
		2004	2005	2006
Standard 1	Students construct meaning as they comprehend, interpret, and respond to what they read.	80%	80%	85%
Standard 2	Students apply a range of skills and strategies to read.	76%	81%	73%
Standard 4	Students select, read, and respond to print and non-print material for a variety of purposes.	67%	64%	69%
Standard 5	Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences.	74%	69%	70%

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## CRT Data Analysis (Cont.)

- **Analyze**
  - Subgroup statistics
  - Class or district performance vs. the state results
  - The process used by students to arrive at an incorrect response
  - Proficient student responses vs. non-proficient student responses

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### Multiple Choice Questions

- What MT Standard is being assessed?
- What do students need to know to answer the question?
- What strategies would they use to get the correct answer?
- What misconceptions or incorrect processes might lead to each incorrect response?
- What are the implications for instruction?

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### Constructed Response Questions

- What do students need to know to answer the question?
- What are the main requirements for a scale 4 answer?
- What would be needed to convert the scale 3 response to a scale 4 response?
- What are the implications for instruction?

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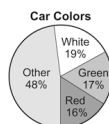
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### Constructed Response 7<sup>th</sup> grade math - 2006 test

25. The manager of Standard Auto has been using the table below to keep track of the colors of cars his customers order. He made this graph to display the data.

Car Colors	
Color	Percent of Customers
White	19%
Green	17%
Red	16%
Brown	10%
Black	6%
Silver	5%
Blue	13%



- Describe one advantage and one disadvantage of the graph the manager made of the data.
- On the grid in your Student Response Booklet, make a bar graph of the data in the table. Be sure to title your graph, label your axes, and show appropriate scale.

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## Released Items

- **Common items are released annually**
  - **OPI Assessment website**
  - **[www.opi.state.mt.us](http://www.opi.state.mt.us)**
    - Then to Testing under the drop down menu
    - Then Assessment
    - Phase II (CRT) then Sample & Released Items
    - Story problems, math vocabulary, answer keys, scoring rubrics, and examples of student work at each score point are provided

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## Released Items (Cont.)

**Now let's take a look at the model answers for the question you just completed. Score your answer as we go through the scoring rubric and point system. Please go to:**  
<http://www.opi.mt.gov/Assessment/Phase2.html>

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## Released Items (Cont.)

**On the released item table of contents – please look at: Math Vocabulary for grades 3-8 & 10. The math vocabulary used on the test is listed in this file – you may want to make sure that these terms are included in the district math classes.**

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### ***iAnalyze Program***

- *...a secure website where data gathered from the CRT assessments is stored.*
- *... built by Measured Progress and is now used in numerous states and districts.*

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### ***iAnalyze Reference Sheet*** (A handout of this information is available)

- *Get into iAnalyze*  
(<http://iservices.measuredprogress.org>)
- *Click on Montana*
- *Click on Enter*
- *Click on iAnalyze*

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### ***iAnalyze Reference Sheet (Cont.)***

- *You will need codes for:*
  - *Organizational –*
  - *Login Name –*
  - *Password –*
- *You can get these from your administrator or test coordinator*

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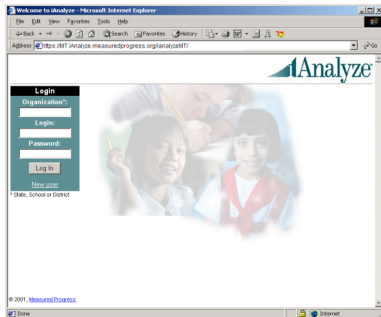
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## Login Page



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## iAnalyze Reference Sheet (Cont.)

- Click on **Select Student Items**
  - Use the drop down menus to select the filter criteria.
  - More filter options across the top – grouping & advanced options.
  - You must click submit after your selections to change the options

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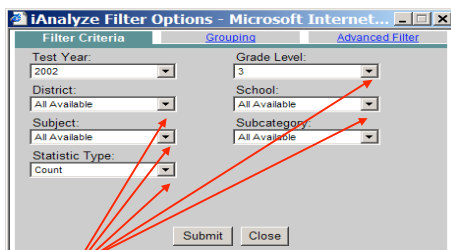
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## Filter Options



Use Drop down menus to select the students and items.  
Remember: Data will only be there if it exists. (No grade 10 data in the elementary school!)

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## iAnalyze Reference Sheet (Cont.)

- **Go to Assessment (drop down menu)**
  - Click on **Proficiency/Group**
    - Check the # of students at each level of performance for Reading & Math
    - Check on the percentage proficient/advanced at each level
  - Click on **Student Proficiency**
    - Student Proficiency Levels & Scaled Scores
    - Click on student booklet ID for results for each student

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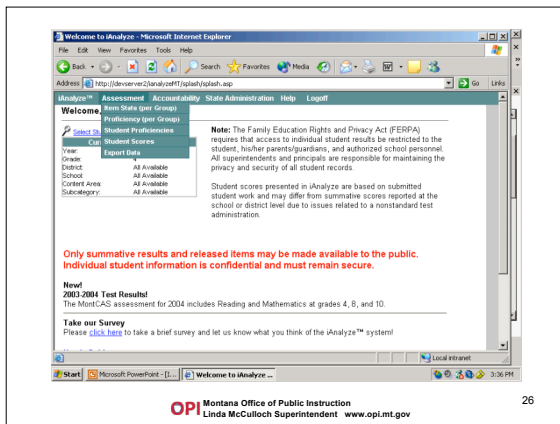
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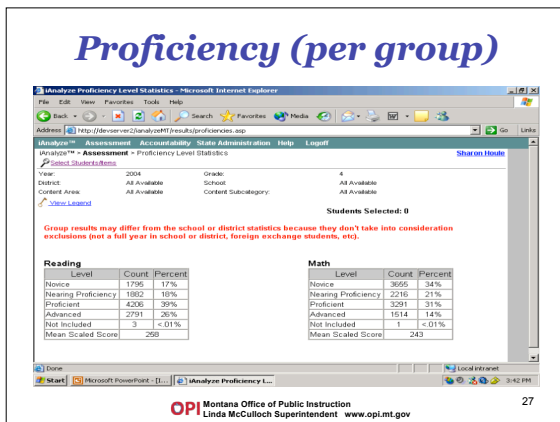
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### *iAnalyze Reference Sheet (Cont.)*

- *Go to Item Statistics (found under assessment)*
  - *Click on item number (to see question)*
  - *Click on Subcategory to sort by standard*
  - *Click on School % Correct to sort by most missed to least missed*
  - *Review correct (+ and Bold) and incorrect answers for distracter analysis*
  - *Review Open Response items*

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### *Item Stats (per group)*

Item Stats (per group)

Year: 2004 Grade: 4  
District: All Available School: All Available  
Content Area: All Available Content Subcategory: All Available  
Students Selected: 0

Group results may differ from the school or district statistics because they don't take into consideration exclusions (not a full year in school or district, foreign exchange students, etc).

Reading

Multiple Choice (Response statistics as counts)

Item	Subcategory	+	A	B	C	D	IR	School % Correct	District % Correct	State % Correct
36	Standard 5	130	130	219	20	62	2		31%	32%
29	Standard 2	152	165	55	60	152	1		33%	36%
53	Standard 2	175	28	175	136	93	1		42%	46%
54	Standard 2	176	104	68	94	176	1		42%	41%
20	Standard 5	208	208	56	48	118	3		48%	45%
27	Standard 2	210	143	210	39	40	1		48%	45%
62	Standard 2	190	81	86	190	74	2		48%	46%
15	Standard 2	204	32	204	106	89	2		50%	51%
65	Standard 5	231	68	45	231	88	1		53%	51%
35	Standard 5	230	28	96	74	230	5		54%	57%
11	Standard 2	237	35	237	120	39	2		55%	54%
12	Standard 2	257	257	65	68	41	2		60%	61%
16	Standard 1	246	246	130	41	14	2		60%	62%
33	Standard 4	246	246	44	85	56	2		60%	58%
71	Standard 4	251	111	43	25	251	3		60%	58%
10	Standard 5	262	12	25	262	133	1		62%	57%

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#### Reading

##### Multiple Choice (Response statistics as counts)

Item	Subcategory	+	A	B	C	D	IR	School % Correct	District % Correct	State % Correct
36	Standard 5	130	130	219	20	62	2		31%	32%
29	Standard 2	152	165	55	60	152	1		33%	36%
53	Standard 2	175	28	175	136	93	1		42%	46%
54	Standard 2	176	104	68	94	176	1		42%	41%
20	Standard 5	208	208	56	48	118	3		48%	45%
27	Standard 2	210	143	210	39	40	1		48%	45%
62	Standard 2	190	81	86	190	74	2		48%	46%
15	Standard 2	204	32	204	106	89	2		50%	51%
65	Standard 5	231	68	45	231	88	1		53%	51%
35	Standard 5	230	28	96	74	230	5		54%	57%
11	Standard 2	237	35	237	120	39	2		55%	54%
12	Standard 2	257	257	65	68	41	2		60%	61%
16	Standard 1	246	246	130	41	14	2		60%	62%
33	Standard 4	246	246	44	85	56	2		60%	58%
71	Standard 4	251	111	43	25	251	3		60%	58%
10	Standard 5	262	12	25	262	133	1		62%	57%

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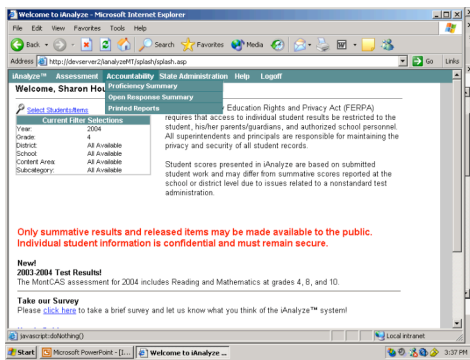
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## iAnalyze Reference Sheet (Cont.)

- Go to Accountability
  - Review Open Response
  - Student Proficiencies
  - Printed Reports (This is your last year for printed reports – will have to use iAnalyze in the future)

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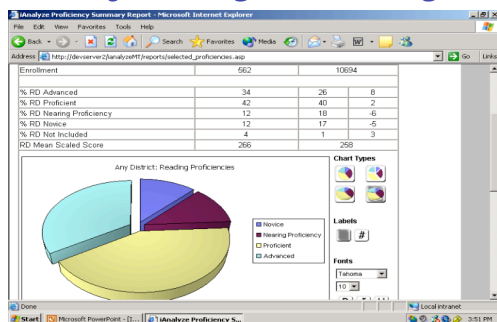
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## Proficiency Summary



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### ***iAnalyze Reference Sheet (Cont.)***

- ***Extremely Important – The information on iAnalyze is confidential and must be protected from viewing by unauthorized individuals.***
  - *Never leave your browser open to iAnalyze when you are not directly working with the program.*
  - *Always completely close your browser and clear the history when you are done on your computer or especially on any other computer.*
  - *Also, please remember if you export data or copy & paste data from iAnalyze treat it with confidentiality.*

### ***CRT Performance Level Descriptors and Scaled Score Ranges (Samples)***

#### **Grade 3**

Performance Level	Reading	Mathematics
Advanced	285–300	291–300
Proficient	250–284	250–290
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

#### **Grade 5**

Performance Level	Reading	Mathematics
Advanced	287–300	291–300
Proficient	250–286	250–290
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

#### **Grade 7**

Performance Level	Reading	Mathematics
Advanced	289–300	291–300
Proficient	250–288	250–290
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

#### **Grade 10**

Performance Level	Reading	Mathematics
Advanced	290–300	278–300
Proficient	250–289	250–277
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

### ***Released Items in iAnalyze***

- ***When in iAnalyze go to the Help button on the tool bar***
- ***Use the drop down menu and click on documentation***
- ***You will find the released items listed for the last three years***



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### ***Other Supplementary Material***

- **Montana Content Standards & Benchmarks are at**  
<http://www.opi.mt.gov/standards/index.html>
- **Math and Reading Grade Level Learning Expectations are at:**  
<http://www.opi.mt.gov/Accred/GLLExpect.html>
- **Performance Descriptors**  
<http://www.opi.mt.gov/Assessment/Phase2.html#perflnd>

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### ***iAnalyze Demonstration***

- **Now go into iAnalyze and begin to use the features**
- **Help is available at the following:**
  - E-mail: [help@iAnalyze-k12.org](mailto:help@iAnalyze-k12.org)
  - Fax: (603) – 749 - 6398
  - Phone: (888) – 465 - 2740

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### ***Data Analysis – Problem 1***

- **Select your filter options:**
- **Select a grade 3-8 or 10**
- **Select reading or math**
- **Then**
- **Go to Item Statistics (found under assessment)**
- **Find the lowest & highest scoring questions for your selection**
- **Which standards & which benchmarks do they test? What grade level learning expectations are these items associated with?**
- **Do you see any trends or patterns?**
- **Do you have any suggestions for possible future action?**

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### ***Data Analysis – Problem 2***

- *Select your filter options:*
- *Select a grade 3-8 or 10*
- *Select reading or math*
- *Select a Grouping (ex: Free/reduced lunch or Gender)*
- *Then*
- *Go to Item Statistics (found under assessment)*
- *Find the lowest & highest scoring questions for your selection*
- *Which standards & which benchmarks do they test? What grade level learning expectations are these items associated with?*
- *Do you see any trends or patterns?*
- *What might you suggest for possible future action?*

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### ***Data Analysis – Problem 3***

- *Select your filter options:*
- *1. Select a grade 3-8 or 10*
- *2. Select reading or math*
- *3. Select Advanced Filter Options – then RDSC or MASC < 250 this will give you novice and nearing proficient students*
- *Then*
- *4. Go to Item Statistics (found under assessment)*
- *5. Find the lowest & highest scoring questions*
- *6. Which standards & which benchmarks do they test? What grade level learning expectations are these items associated with?*
- *7. Do you see any trends or patterns?*
- *8. What might you suggest for possible future action?*

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### ***OPI Contact Information***

- Karen Richem
  - Assessment Specialist
  - 406-444-0748
  - [krichem@mt.gov](mailto:krichem@mt.gov)
- Judy Snow
  - State Assessment Director
  - 406-444-3656
  - [jsnow@mt.gov](mailto:jsnow@mt.gov)

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### ***OPI iAnalyze Presenters***

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### ***Measured Progress iAnalyze Contact Information***

- E-mail: [help@iAnalyze-k12.org](mailto:help@iAnalyze-k12.org)
- Fax: (603) – 749 - 6398
- Phone: (888) – 465 - 2740

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